

State of West Virginia
Department of Environmental Protection - Office of Oil and Gas
Well Operator's Report of Well Work

PM

API 47 - 039 - 06365 County Kanawha District E1K
Quad Big Chimney Pad Name _____ Field/Pool Name National Guard
Farm name West Virginia Department of Public Safety, Armory Board Well Number #1
Operator (as registered with the OOG) Reserve Oil and Gas, Inc.
Address 929 Charleston Road City Spencer State WV Zip 25276

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 4247609 Easting 0449289
Landing Point of Curve Northing _____ Easting _____
Bottom Hole Northing _____ Easting _____

Elevation (ft) 860 GL Type of Well ☒ New ☐ Existing Type of Report ☐ Interim ☒ Final
Permit Type ☐ Deviated ☐ Horizontal ☐ Horizontal 6A ☒ Vertical Depth Type ☐ Deep ☒ Shallow
Type of Operation ☐ Convert ☐ Deepen ☒ Drill ☐ Plug Back ☐ Redrilling ☐ Rework ☒ Stimulate
Well Type ☐ Brine Disposal ☐ CBM ☒ Gas ☐ Oil ☐ Secondary Recovery ☐ Solution Mining ☐ Storage ☐ Other _____
Type of Completion ☐ Single ☒ Multiple Fluids Produced ☐ Brine ☒ Gas ☐ NGL ☐ Oil ☐ Other _____
Drilled with ☐ Cable ☒ Rotary

Drilling Media Surface hole ☒ Air ☐ Mud ☐ Fresh Water Intermediate hole ☒ Air ☐ Mud ☐ Fresh Water ☐ Brine
Production hole ☐ Air ☒ Mud ☐ Fresh Water ☐ Brine
Mud Type(s) and Additive(s)
N/A

RECEIVED
Office of Oil and Gas
Date permit issued 4/18/14 Date drilling commenced 5/6/2014 Date drilling ceased 5/18/2014
Date completion activities began 5/22/2014 Date completion activities ceased 5/23/2014
Verbal plugging (Y/N) No Date permission granted N/A Granted by N/A

WV Department of
Environmental Protection

Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug

Freshwater depth(s) ft 80', 517' Open mine(s) (Y/N) depths No
Salt water depth(s) ft 1028' Void(s) encountered (Y/N) depths No
Coal depth(s) ft N/A Cavern(s) encountered (Y/N) depths No
Is coal being mined in area (Y/N) No

Reviewed by:

API 47- 039 - 06365 Farm name WV Dept of Public Safety Well number #1 (National Guard)

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft	Basket Depth(s)	Did cement circulate (Y/ N) * Provide details below*
Conductor	17 1/2"	13 3/8"	18'	New	48 lb	N/A	surface by hand
Surface	12 1/4"	9 5/8"	336'	New	26 lb	N/A	yes, 10 bbls to pit
Coal							
Intermediate 1	8 7/8"	7"	1814'	New	17 lb	295'	Yes, 5 bbls to pit
Intermediate 2							
Intermediate 3							
Production	6 1/2"	4 1/2"	4505.35'	New	11.6 lb	JTS: 11, 21, 31	41, 51
Tubing							
Packer type and depth set							

Comment Details _____

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft ³ /sks)	Volume (ft ³)	Cement Top (MD)	WOC (hrs)
Conductor	Type 2	7	N/A	N/A	N/A	0	9 hrs
Surface	Type 1	125	15.6	1.17		0	10 hrs
Coal							
Intermediate 1	Type 1 / 28 Ca 28 gal. 25 flake	275	14.8	1.40	385.0	0	15 hrs
Intermediate 2	Type 1 NEAT	50	15.6	1.18	59.0	0	15 hrs
Intermediate 3							
Production	Strong Lite 250 / kel / seal	155	12.3	2.34	362.7		
Tubing							

Drillers TD (ft) 4520 Loggers TD (ft) 4510

Deepest formation penetrated Rhine street Plug back to (ft) 4502

Plug back procedure N/A

Kick off depth (ft) N/A

Check all wireline logs run ☒ caliper ☒ density ☐ deviated/directional ☐ induction
☐ neutron ☐ resistivity ☒ gamma ray ☒ temperature ☒ sonic

Well cored ☐ Yes ☒ No ☐ Conventional ☐ Sidewall Were cuttings collected ☐ Yes ☒ No

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING _____

13 3/8" N/A
9 5/8" N/A
7" N/A
4 1/2" @ JTS: 10, 20, 30, 40, 50, 60

WAS WELL COMPLETED AS SHOT HOLE ☒ Yes ☐ No DETAILS _____

WAS WELL COMPLETED OPEN HOLE? ☐ Yes ☒ No DETAILS _____

WERE TRACERS USED ☐ Yes ☒ No TYPE OF TRACER(S) USED _____

PERFORATION RECORD

Please insert additional pages as applicable.

Complete a separate record for each stimulation stage.

Please insert additional pages as applicable.

Farm name WV Dept of Public Safety Well number #1 (National Guard)

DEPTHS

OPEN FLOW	Gas	Oil	NGL	Water	GAS MEASURED BY		
	267 mcfpd	bpd	bpd	bpd	<input type="checkbox"/> Estimated	<input checked="" type="checkbox"/> Orifice	<input type="checkbox"/> Pilot

[illegible]

Submittal of Hydraulic Fracturing Chemical Disclosure Information Attach copy of FRACFOCUS Registry

[illegible]

WR-35
Rev (9-11)

State of West Virginia
Department of Environmental Protection
Office of Oil and Gas
Well Operator's Report of Well Work

DATE: 09/03/2013
API #: 47-041-05672

Farm name: Ireland, James G Operator Well No.: Ireland Well

LOCATION: Elevation: 856.83 Quadrangle: Vadis WV 7.5'

District: Freeman's Creek County: Lewis
Latitude: 70 Feet South of 39 Deg. 05 Min. 00 Sec.
Longitude 190 Feet West of 80 Deg. 37 Min. 30 Sec.

Company: Dominion Transmission Inc.

Address: 445 West Main St Clarksburg, WV 26301	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Agent: James D. Blasingame	24"	12.6'	12.6'	grouted w/ 54cuft
Inspector: Bill Hatfield	7"	32'	32'	grouted w/ 15cuft
Date Permit Issued: 1/11/2013				
Date Well Work Commenced: 1/11/2013				
Date Well Work Completed: 2/8/2013				
Verbal Plugging:				
Date Permission granted on:				
Rotary <input type="checkbox"/> Cable <input type="checkbox"/> Rig <input checked="" type="checkbox"/>				
Total Vertical Depth (ft): 114'				
Total Measured Depth (ft): 114'				
Fresh Water Depth (ft.): 31'				
Salt Water Depth (ft.): not encountered				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.): unknown				
Void(s) encountered (N/Y) Depth(s) N				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation none Pay zone depth (ft)

Gas: Initial open flow MCF/d Oil: Initial open flow Bbl/d

Final open flow MCF/d Final open flow Bbl/d

Time of open flow between initial and final tests Hours

Static rock Pressure psig (surface pressure) after Hours

Second producing formation Pay zone depth (ft)

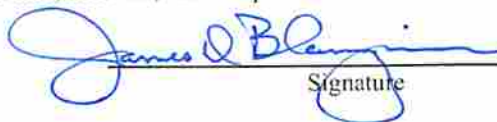
Gas: Initial open flow MCF/d Oil: Initial open flow Bbl/d

Final open flow MCF/d Final open flow Bbl/d

Time of open flow between initial and final tests Hours

Static rock Pressure psig (surface pressure) after Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.


Signature

9/9/13
Date

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Office of Oil and Gas
SEP 13 2013

WV Department of
Environmental Protection

41-05672

Were core samples taken? Yes _____ No ☒

Were cuttings caught during drilling? Yes _____ No ☒

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list _____

No electrical logs, a camera was run to confirm water depths and conclude this was only a water well and not an old abandoned gas/oil well.

NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.

Perforated Intervals, Fracturing, or Stimulating:

Old tubing string found in yard was determined to be a water well and not vent pipe from an abandoned natural gas or oil well.

Plug Back Details Including Plug Type and Depth(s):

Formations Encountered:

Top Depth

/

Bottom Depth

Surface:

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SEP 13 2013

WV Department of
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State of West Virginia
Department of Environmental Protection - Office of Oil and Gas
Well Operator's Report of Well Work

Page 1 of 4
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JUL 23 2014

WV Department of
Environmental Protection

API 47 - 043 - 03447 County LINCOLN District DUVAL
Quad GRIFFITHSVILLE 7.5' Pad Name GRIFFITH, AUSTIN Field/Pool Name GRIFFITHSVILLE
Farm name ALLEN, TERRY & DAWNA Well Number 212
Operator (as registered with the OOG) H.G. ENERGY LLC
Address 5260 DuPONT ROAD City PARKERSBURG State WV Zip 26101

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 4,231,567 M Easting 416,223 M
Landing Point of Curve Northing _____ Easting _____
Bottom Hole Northing _____ Easting _____

Elevation (ft) 997' GL Type of Well ☒ New ☐ Existing Type of Report ☐ Interim ☒ Final
Permit Type ☐ Deviated ☐ Horizontal ☐ Horizontal 6A ☒ Vertical Depth Type ☐ Deep ☒ Shallow
Type of Operation ☐ Convert ☐ Deepen ☒ Drill ☐ Plug Back ☐ Redrilling ☐ Rework ☐ Stimulate
Well Type ☐ Brine Disposal ☐ CBM ☐ Gas ☐ Oil ☒ Secondary Recovery ☐ Solution Mining ☐ Storage ☐ Other _____
Type of Completion ☒ Single ☐ Multiple Fluids Produced ☐ Brine ☐ Gas ☐ NGL ☒ Oil ☐ Other _____
Drilled with ☐ Cable ☒ Rotary

Drilling Media Surface hole ☒ Air ☐ Mud ☒ Fresh Water Intermediate hole ☒ Air ☐ Mud ☒ Fresh Water ☐ Brine
Production hole ☒ Air ☐ Mud ☐ Fresh Water ☒ Brine
Mud Type(s) and Additive(s)
N/A

Date permit issued 6/13/2013 Date drilling commenced 6/18/2014 Date drilling ceased 6/21/14
Date completion activities began 7/11/14 Date completion activities ceased 7/15/14
Verbal plugging (Y/N) N Date permission granted _____ Granted by _____

Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug

Freshwater depth(s) ft 650' Open mine(s) (Y/N) depths N
Salt water depth(s) ft 1190', 1450' Void(s) encountered (Y/N) depths N
Coal depth(s) ft 588'-592' Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

Reviewed by: _____

API 47- 043 - 03455 Farm name ALLEN, TERRY & DAWNA Well number 107

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft	Basket Depth(s)	Did cement circulate (Y/ N) * Provide details below*
Conductor	12 1/4"	11 5/8"	30'	Used	LS		Sand In
Surface	8 3/4"	7"	548'	New	LS	84'	Y
Coal							
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production	6 1/4"	4 1/2"	2487.55'	New	J-55		N
Tubing							
Packer type and depth set							

Comment Details Circulated Est. 50 sks to surface on 7" surface cement job.

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft ³ /sks)	Volume (ft ³)	Cement Top (MD)	WOC (hrs)
Conductor							
Surface	Reg Neat	130	15.6	1.18	153	Surface	8
Coal							
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production	50:50 Pozmix	150	14.2	1.27	254	944'	8
Tubing							

Drillers TD (ft) 2513' Loggers TD (ft) 2516'
Deepest formation penetrated Berea Plug back to (ft) N/A
Plug back procedure N/A

Kick off depth (ft) N/A

Check all wireline logs run ☒ caliper ☒ density ☒ deviated/directional ☒ induction
☒ neutron ☒ resistivity ☒ gamma ray ☒ temperature ☐ sonic

Well cored ☐ Yes ☒ No Conventional Sidewall Were cuttings collected ☒ Yes ☐ No

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING _____

8 Centralizers every 84' from bottom on 4 1/2", Centralizer placed mid string on 7"

WAS WELL COMPLETED AS SHOT HOLE ☐ Yes ☒ No DETAILS _____

WAS WELL COMPLETED OPEN HOLE? ☐ Yes ☒ No DETAILS _____

WERE TRACERS USED ☐ Yes ☒ No TYPE OF TRACER(S) USED _____

API 47-043 . 03447 Farm name ALLEN, TERRY & DAWNA Well number 212

PERFORATION RECORD

[illegible]

Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

[illegible]

Please insert additional pages as applicable.

API 47- 043 - 03447 Farm name ALLEN, TERRY & DAWNA Well number 212

PRODUCING FORMATION(S)

DEPTHS

Berea 2506'-2520' TVD 2506'-2520' MD

Please insert additional pages as applicable.

GAS TEST ☐ Build up ☐ Drawdown ☐ Open Flow OIL TEST ☐ Flow ☐ Pump

SHUT-IN PRESSURE Surface _____ psi Bottom Hole _____ psi DURATION OF TEST _____ hrs

OPEN FLOW Gas _____ Oil _____ NGL _____ Water _____
_____ mcfpd _____ bpd _____ bpd _____ bpd GAS MEASURED BY
☐ Estimated ☐ Orifice ☐ Pilot

LITHOLOGY/ FORMATION	TOP DEPTH IN FT NAME TVD	BOTTOM DEPTH IN FT TVD	TOP DEPTH IN FT MD	BOTTOM DEPTH IN FT MD	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H ₂ S, ETC)
Sand/Shale	0	588	0		
Pittsburgh Coal	588	592			
Sand/Shale	592	1762			
Big Lime	1762	1970			
Big Injun	1970	2074			
Shale	2074	2482			
Coffee Shale	2482	2502			
Berea	2502	2524			
Shale	2524	2675			
TD	2675				

Please insert additional pages as applicable.

Drilling Contractor Decker Drilling
Address 11565 State Route 676 City Vincent State OH Zip 45784

Logging Company Weatherford International
Address 777 North River Avenue City Weston State WV Zip 26452

Cementing Company Universal Services
Address 5252 Rt 1428 City Allen State KY Zip 41601

Stimulating Company Producers Service Corp.
Address 109 South Graham Street City Zanesville State OH Zip 43701

Please insert additional pages as applicable.

Completed by Roger Heldman Telephone 304-420-1107
Signature  Title Operations Manager Date 7/18/14

Submittal of Hydraulic Fracturing Chemical Disclosure Information Attach copy of FRACFOCUS Registry

State of West Virginia
Department of Environmental Protection - Office of Oil and Gas
Well Operator's Report of Well Work

API 47-043-03448 County LINCOLN District DUVAL
Quad GRIFFITHSVILLE 7.5' Pad Name GRIFFITH, AUSTIN Field/Pool Name GRIFFITHSVILLE
Farm name ALLEN, TERRY & DAWNA Well Number 213
Operator (as registered with the OOG) H.G. ENERGY LLC
Address 5260 DuPONT ROAD City PARKERSBURG State WV Zip 26101

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 4,231,751 M Easting 416,125 M
Landing Point of Curve Northing Easting
Bottom Hole Northing Easting

Elevation (ft) 1,018' GL Type of Well ☒ New ☐ Existing Type of Report ☐ Interim ☒ Final
Permit Type ☐ Deviated ☐ Horizontal ☐ Horizontal 6A ☒ Vertical Depth Type ☐ Deep ☒ Shallow
Type of Operation ☐ Convert ☐ Deepen ☒ Drill ☐ Plug Back ☐ Redrilling ☐ Rework ☐ Stimulate
Well Type ☐ Brine Disposal ☐ CBM ☐ Gas ☐ Oil ☒ Secondary Recovery ☐ Solution Mining ☐ Storage ☐ Other
Type of Completion ☒ Single ☐ Multiple Fluids Produced ☐ Brine ☐ Gas ☐ NGL ☒ Oil ☐ Other
Drilled with ☐ Cable ☒ Rotary

Drilling Media Surface hole ☒ Air ☐ Mud ☒ Fresh Water Intermediate hole ☒ Air ☐ Mud ☒ Fresh Water ☐ Brine
Production hole ☒ Air ☐ Mud ☐ Fresh Water ☒ Brine
Mud Type(s) and Additive(s)
N/A

Date permit issued 5/31/2013 Date drilling commenced 6/24/2014 Date drilling ceased 6/2/14
Date completion activities began 7/11/14 Date completion activities ceased 7/15/14
Verbal plugging (Y/N) N Date permission granted Granted by

Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug

Freshwater depth(s) ft N/A Open mine(s) (Y/N) depths N
Salt water depth(s) ft 1160', 1300' Void(s) encountered (Y/N) depths N
Coal depth(s) ft 600'-608' Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

Reviewed by:

API 47- 043 - 03448 Farm name ALLEN, TERRY & DAWNA Well number 213

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft	Basket Depth(s)	Did cement circulate (Y/ N) * Provide details below*
Conductor	12 1/4"	11 5/8"	30'	Used	LS		Sand In
Surface	8 3/4"	7"	675'	New	LS	84'	Y
Coal							
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production	6 1/4"	4 1/2"	2651'	New	J-55		N
Tubing							
Packer type and depth set							

Comment Details Circulated Est. 45 sks to surface on 7" surface cement job.

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft ³ /sks)	Volume (ft ³)	Cement Top (MD)	WOC (hrs)
Conductor							
Surface	Reg Neat	150	15.6	1.18	177	Surface	8
Coal							
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production	50:50 Pozmix	150	14.2	1.27	254	1154'	8
Tubing							

Drillers TD (ft) 2680' Loggers TD (ft) 2689'
 Deepest formation penetrated Berea Plug back to (ft) N/A
 Plug back procedure N/A

Kick off depth (ft) N/A

Check all wireline logs run ☒ caliper ☒ density ☒ deviated/directional ☒ induction
☒ neutron ☒ resistivity ☒ gamma ray ☒ temperature ☐ sonic

Well cored ☐ Yes ☒ No Conventional Sidewall Were cuttings collected ☒ Yes ☐ No

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING _____

6 Centralizers every 84 from bottom on 4 1/2", Centralizer placed mid string on 7"

WAS WELL COMPLETED AS SHOT HOLE ☐ Yes ☒ No DETAILS _____

WAS WELL COMPLETED OPEN HOLE? ☐ Yes ☒ No DETAILS _____

WERE TRACERS USED ☐ Yes ☒ No TYPE OF TRACER(S) USED _____

API 47- 043 - 03448

Farm name **ALLEN, TERRY & DAWNA**

Well number 213

PERFORATION RECORD

[illegible]

Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

[illegible]

Please insert additional pages as applicable.

API 47- 043 - 03448

Farm name ALLEN, TERRY & DAWNA

Well number 213

PRODUCING FORMATION(S)

DEPTHS

Berea 2488'-2502' TVD 2488'-2502' MD

Please insert additional pages as applicable.

GAS TEST ☐ Build up ☐ Drawdown ☐ Open Flow

OIL TEST ☐ Flow ☐ Pump

SHUT-IN PRESSURE Surface _____ psi Bottom Hole _____ psi DURATION OF TEST _____ hrs

OPEN FLOW Gas _____ mcfpd Oil _____ bpd NGL _____ bpd Water _____ bpd
GAS MEASURED BY ☐ Estimated ☐ Orifice ☐ Pilot

LITHOLOGY/ FORMATION	TOP DEPTH IN FT NAME TVD	BOTTOM DEPTH IN FT TVD	TOP DEPTH IN FT MD	BOTTOM DEPTH IN FT MD	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H ₂ S, ETC)
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Sand/Shale	0	600	0		
Pittsburgh Coal	600	608			
Sand/Shale	608	1764			
Big Lime	1764	1970			
Big Injun	1970	2062			
Shale	2062	2464			
Coffee Shale	2464	2486			
Berea	2486	2504			
Shale	2504	2680			
TD	2680				

Please insert additional pages as applicable.

Drilling Contractor Decker Drilling

Address 11565 State Route 676 City Vincent State OH Zip 45784

Logging Company Weatherford International

Address 777 North River Avenue City Weston State WV Zip 26452

Cementing Company Universal Services

Address 5252 Rt 1428 City Allen State KY Zip 41601


Stimulating Company Producers Service Corp.

Address 109 South Graham Street City Zanesville State OH Zip 43701

Please insert additional pages as applicable.

Completed by Roger Heldman

Telephone 304-420-1107

Signature  Title Operations Manager Date 7/18/14

Submittal of Hydraulic Fracturing Chemical Disclosure Information

Attach copy of FRACFOCUS Registry

Prepared for:
HG Energy
Dustin Hendershot



Prepared by:
Producers Service Corp
Chris Bryan
109 S. Graham St.
Zanesville, OH 43702
740-454-6253

CUSTOMER PO#

[illegible]

Customer Approval: _____

State of West Virginia
Department of Environmental Protection - Office of Oil and Gas
Well Operator's Report of Well Work

PM

API 47 - 043 - 03455 County LINCOLN District DUVAL
Quad GRIFFITHSVILLE 7.5' Pad Name GRIFFITH, AUSTIN Field/Pool Name GRIFFITHSVILLE
Farm name ALLEN, TERRY & DAWNA Well Number 107
Operator (as registered with the OOG) H.G. ENERGY LLC
Address 5260 DuPONT ROAD City PARKERSBURG State WV Zip 26101

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 4,231,549 M Easting 416,000 M
Landing Point of Curve Northing _____ Easting _____
Bottom Hole Northing _____ Easting _____

Elevation (ft) 855' GL Type of Well ☒ New ☐ Existing Type of Report ☐ Interim ☒ Final
Permit Type ☐ Deviated ☐ Horizontal ☐ Horizontal 6A ☒ Vertical Depth Type ☐ Deep ☒ Shallow
Type of Operation ☐ Convert ☐ Deepen ☒ Drill ☐ Plug Back ☐ Redrilling ☐ Rework ☐ Stimulate
Well Type ☐ Brine Disposal ☐ CBM ☐ Gas ☐ Oil ☒ Secondary Recovery ☐ Solution Mining ☐ Storage ☐ Other _____
Type of Completion ☒ Single ☐ Multiple Fluids Produced ☐ Brine ☐ Gas ☐ NGL ☒ Oil ☐ Other _____
Drilled with ☐ Cable ☒ Rotary

Drilling Media Surface hole ☒ Air ☐ Mud ☒ Fresh Water Intermediate hole ☒ Air ☐ Mud ☒ Fresh Water ☐ Brine
Production hole ☒ Air ☐ Mud ☐ Fresh Water ☒ Brine
Mud Type(s) and Additive(s)
N/A

Date permit issued 5/31/2013 Date drilling commenced 6/28/2014 Date drilling ceased 7/1/14
Date completion activities began 7/11/14 Date completion activities ceased 7/15/14
Verbal plugging (Y/N) N Date permission granted JUL 28 2014 Granted by _____

Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug

WV Department of
Environmental Protection

Freshwater depth(s) ft N/A Open mine(s) (Y/N) depths N
Salt water depth(s) ft 1040', 1460' Void(s) encountered (Y/N) depths N
Coal depth(s) ft 444'- 454' Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

Reviewed by:

API 47- 043 - 03455

Farm name ALLEN, TERRY & DAWNA

Well number 107

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft	Basket Depth(s)	Did cement circulate (Y/ N) * Provide details below*
Conductor	12 1/4"	11 5/8"	30'	Used	LS		Sand In
Surface	8 3/4"	7"	548'	New	LS	84'	Y
Coal							
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production	6 1/4"	4 1/2"	2487.55'	New	J-55		N
Tubing							
Packer type and depth set							

Comment Details Circulated Est. 50 sks to surface on 7" surface cement job.

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft ³ /sks)	Volume (ft ³)	Cement Top (MD)	WOC (hrs)
Conductor							
Surface	Reg Neat	130	15.6	1.18	153	Surface	8
Coal							
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production	50:50 Pozmix	150	14.2	1.27	254	890'	8
Tubing							

Drillers TD (ft) 2513'

Loggers TD (ft) 2516'

Deepest formation penetrated Berea

Plug back to (ft) N/A

Plug back procedure N/A

Kick off depth (ft) N/A

Check all wireline logs run

☒ caliper ☒ density ☒ deviated/directional ☒ induction
☒ neutron ☒ resistivity ☒ gamma ray ☒ temperature ☐ sonic

Well cored ☐ Yes ☒ No

Conventional Sidewall

Were cuttings collected ☒ Yes ☐ No

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING

6 Centralizers every 84' from bottom on 4 1/2". Centralizer placed mid string on 7"

WAS WELL COMPLETED AS SHOT HOLE ☐ Yes ☒ No DETAILS

WAS WELL COMPLETED OPEN HOLE? ☐ Yes ☒ No DETAILS

WERE TRACERS USED ☐ Yes ☒ No TYPE OF TRACER(S) USED

API 47- 043 - 03455 Farm name ALLEN, TERRY & DAWNA Well number 107

PERFORATION RECORD

[illegible]

Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

[illegible]

Please insert additional pages as applicable.

Farm name ALLEN, TERRY & DAWNA Well number 107

DEPTHS

SHUT-IN PRESSURE Surface psi Bottom Hole _____ psi DURATION OF TEST _____ hrs

[illegible]

	NAME	TYD	TYD	MD	MD	TYPE OF FLOID (FRESHWATER, OIL, GAS, H ₂ O, ETC)
Sand/Shale	0	444	0			
Pittsburgh Coal	444	454				
Sand/Shale	454	1618				
Big Lime	1618	1830				
Big Injun	1830	1918				
Shale	1918	2320				
Coffee Shale	2320	2340				
Berea	2340	2356				
Shale	2356	2513				
TD	2513					

Address 11565 State Route 676 City Vincent State OH Zip 45784

Address 777 North River Avenue City Weston State WV Zip 26452

Address 5252 Rt 1428 City Allen State KY Zip 41601

Address 109 South Graham Street City Zanesville State OH Zip 43701

Signature Title Operations Manager Date 7/18/14

Submittal of Hydraulic Fracturing Chemical Disclosure Information **Attach copy of FRACFOCUS Registry**

Customer Approval: _____

State of West Virginia
Department of Environmental Protection - Office of Oil and Gas
Well Operator's Report of Well Work

pm

API 47 - 043 - 03465 County LINCOLN District DUVAL
Quad GRIFFITHSVILLE 7.5' Pad Name GRIFFITH, AUSTIN Field/Pool Name GRIFFITHSVILLE
Farm name ALLEN, TERRY & DAWNA Well Number 127
Operator (as registered with the OOG) H.G. ENERGY LLC
Address 5260 DuPONT ROAD City PARKERSBURG State WV Zip 26101

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 4,231,693 M Easting 416,323 M
Landing Point of Curve Northing _____ Easting _____
Bottom Hole Northing _____ Easting _____

Elevation (ft) 1,108' GL Type of Well ☒ New ☐ Existing Type of Report ☐ Interim ☒ Final
Permit Type ☐ Deviated ☐ Horizontal ☐ Horizontal 6A ☒ Vertical Depth Type ☐ Deep ☒ Shallow
Type of Operation ☐ Convert ☐ Deepen ☒ Drill ☐ Plug Back ☐ Redrilling ☐ Rework ☐ Stimulate
Well Type ☐ Brine Disposal ☐ CBM ☐ Gas ☐ Oil ☒ Secondary Recovery ☐ Solution Mining ☐ Storage ☐ Other _____
Type of Completion ☒ Single ☐ Multiple Fluids Produced ☐ Brine ☐ Gas ☐ NGL ☒ Oil ☐ Other _____
Drilled with ☐ Cable ☒ Rotary

Drilling Media Surface hole ☒ Air ☐ Mud ☒ Fresh Water Intermediate hole ☒ Air ☐ Mud ☒ Fresh Water ☐ Brine
Production hole ☒ Air ☐ Mud ☐ Fresh Water ☒ Brine
Mud Type(s) and Additive(s)
N/A

Date permit issued 6/13/2013 Date drilling commenced 6/10/2014 Date drilling ceased 6/2/14
Date completion activities began 6/24/14 Date completion activities ceased 6/27/14
Verbal plugging (Y/N) N Date permission granted _____ Granted by _____

Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug

Freshwater depth(s) ft N/A Open mine(s) (Y/N) depths N
Salt water depth(s) ft 1260', 1460' Void(s) encountered (Y/N) depths N
Coal depth(s) ft 700'-710' Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

RECEIVED
Office of Oil and Gas
JUL 22 2014
WV Department of
Environmental Protection
Reviewed by: _____

on

API 47- 043 - 03465 Farm name ALLEN, TERRY & DAWNA Well number 127

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft	Basket Depth(s)	Did cement circulate (Y/ N) * Provide details below*
Conductor	12 1/4"	11 5/8"	30'	Used	LS		Sand In
Surface	8 3/4"	7"	802'	New	LS	84'	Y
Coal							
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production	6 1/4"	4 1/2"	2731.8'	New	J-55		N
Tubing							
Packer type and depth set							

Comment Details Circulated Est. 45 sks to surface on 7" surface cement job.

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft ³ /sks)	Volume (ft ³)	Cement Top (MD)	WOC (hrs)
Conductor							
Surface	Reg Neat	190	15.6	1.18	224	Surface	8
Coal							
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production	50:50 Pozmix	150	14.2	1.27	254	890'	8
Tubing							

Drillers TD (ft) 2750' Loggers TD (ft) 2754'

Deepest formation penetrated Berea Plug back to (ft) N/A

Plug back procedure N/A

Kick off depth (ft) N/A

Check all wireline logs run ☒ caliper ☒ density ☒ deviated/directional ☒ induction
☒ neutron ☒ resistivity ☒ gamma ray ☒ temperature ☐ sonic

Well cored ☐ Yes ☒ No Conventional Sidewall Were cuttings collected ☒ Yes ☐ No

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING

6 Centralizers every 84 from bottom on 4 1/2". Centralizer placed mid string on 7"

WAS WELL COMPLETED AS SHOT HOLE ☐ Yes ☒ No DETAILS

WAS WELL COMPLETED OPEN HOLE? ☐ Yes ☒ No DETAILS

WERE TRACERS USED ☐ Yes ☒ No TYPE OF TRACER(S) USED

Well number 127

[illegible]

STIMULATION INFORMATION PER STAGE

[illegible]

Please insert additional pages as applicable.

API 47- 043 - 03465 Farm name ALLEN, TERRY & DAWNA Well number 127

PRODUCING FORMATION(S)

DEPTHS

Berea 2598'-2608' TVD 2598'-2608' MD

Please insert additional pages as applicable.

GAS TEST ☐ Build up ☐ Drawdown ☐ Open Flow OIL TEST ☐ Flow ☐ Pump

SHUT-IN PRESSURE Surface psi Bottom Hole psi DURATION OF TEST hrs

OPEN FLOW Gas mcfpd Oil bpd NGL bpd Water bpd GAS MEASURED BY ☐ Estimated ☐ Orifice ☐ Pilot

LITHOLOGY/ FORMATION	TOP DEPTH IN FT NAME TVD	BOTTOM DEPTH IN FT TVD	TOP DEPTH IN FT MD	BOTTOM DEPTH IN FT MD	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H ₂ S, ETC)
Sand/Shale	0	700	0		
Pittsburgh Coal	700	710			
Sand/Shale	710	1864			
Big Lime	1864	2076			
Big Injun	2076	2173			
Shale	2173	2573			
Coffee Shale	2573	2594			
Berea	2594	2616			
Shale	2616	2750			
TD	2750				

Please insert additional pages as applicable.

Drilling Contractor Decker Drilling
Address 11565 State Route 676 City Vincent State OH Zip 45784

Logging Company Weatherford International
Address 777 North River Avenue City Weston State WV Zip 26452

Cementing Company Universal Services
Address 5252 Rt 1428 City Allen State KY Zip 41601

Stimulating Company Producers Service Corp.
Address 109 South Graham Street City Zanesville State OH Zip 43701

Please insert additional pages as applicable.

Completed by Roger Heldman Telephone 304-420-1107
Signature  Title Operations manager Date 7/18/14

Submittal of Hydraulic Fracturing Chemical Disclosure Information Attach copy of FRACFOCUS Registry

Prepared for:
HG Energy
Dustin Hendershot
304 771 5432



Prepared by:
Producers Service Corp
Chris Bryan
109 S. Graham St.
Zanesville, OH 43702
740-454-6253

INVOICE #:	16737
WELL NAME:	Austin Griffith #127
STATE & COUNTY:	Lincoln,WV
TOWNSHIP/FIELD:	Griffithsville
DATE of SERVICE:	6/27/2014
CUSTOMER PO#	

[illegible]

TOT.

Customer Approval: _____

State of West Virginia
Department of Environmental Protection - Office of Oil and Gas
Well Operator's Report of Well Work

RECEIVED
Office of Oil and Gas

JUL 23 2014

API 47 - 043 - 03468 County LINCOLN District DUVAL
Quad GRIFFITHSVILLE 7.5' Pad Name M.A. BAYS Field/Pool Name GRIFFITHSVILLE
Farm name ALLEN, TERRY & DAWNA Well Number 124
Operator (as registered with the OOG) H.G. ENERGY LLC
Address 5260 DuPONT ROAD City PARKERSBURG State WV Zip 26101

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 4,231,867 M Easting 416,287 M
Landing Point of Curve Northing _____ Easting _____
Bottom Hole Northing _____ Easting _____

Elevation (ft) 1,140' GL Type of Well ☒ New ☐ Existing Type of Report ☐ Interim ☒ Final
Permit Type ☐ Deviated ☐ Horizontal ☐ Horizontal 6A ☒ Vertical Depth Type ☐ Deep ☒ Shallow
Type of Operation ☐ Convert ☐ Deepen ☒ Drill ☐ Plug Back ☐ Redrilling ☐ Rework ☐ Stimulate
Well Type ☐ Brine Disposal ☐ CBM ☐ Gas ☐ Oil ☒ Secondary Recovery ☐ Solution Mining ☐ Storage ☐ Other _____
Type of Completion ☒ Single ☐ Multiple Fluids Produced ☐ Brine ☐ Gas ☐ NGL ☒ Oil ☐ Other _____
Drilled with ☐ Cable ☒ Rotary

Drilling Media Surface hole ☒ Air ☐ Mud ☒ Fresh Water Intermediate hole ☒ Air ☐ Mud ☒ Fresh Water ☐ Brine
Production hole ☒ Air ☐ Mud ☐ Fresh Water ☒ Brine
Mud Type(s) and Additive(s)
N/A

Date permit issued 6/13/2013 Date drilling commenced 6/13/2014 Date drilling ceased 6/18/14
Date completion activities began 6/24/14 Date completion activities ceased 6/27/14
Verbal plugging (Y/N) N Date permission granted _____ Granted by _____

Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug

Freshwater depth(s) ft N/A Open mine(s) (Y/N) depths N
Salt water depth(s) ft 1,170', 1,480' Void(s) encountered (Y/N) depths N
Coal depth(s) ft 729'- 735' Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

Reviewed by:

WR-35
Rev. 8/23/13

Page 2 of 4

API 47- 043 - 03468

Farm name ALLEN, TERRY & DAWNA

Well number 124

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft	Basket Depth(s)	Did cement circulate (Y/ N) * Provide details below*
Conductor	12 1/4"	11 5/8"	30'	Used	LS		Sand In
Surface	8 3/4"	7"	802'	New	LS	84'	Y
Coal							
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production	6 1/4"	4 1/2"	2739'	New	J-55		N
Tubing							
Packer type and depth set							

Comment Details Circulated Est. 50 sks to surface on 7" surface cement job.

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft ³ /sks)	Volume (ft ³)	Cement Top (MD)	WOC (hrs)
Conductor							
Surface	Reg Neat	200	15.6	1.18	236	Surface	8
Coal							
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production	50:50 Pozmix/ Econo	150	14.2	1.27	254	1300'	8
Tubing							

Drillers TD (ft) 2750'

Loggers TD (ft) 2754'

Deepest formation penetrated Berea

Plug back to (ft) N/A

Plug back procedure N/A

Kick off depth (ft) N/A

Check all wireline logs run

☒ caliper

☒ density

☒ deviated/directional

☒ induction

☒ neutron

☒ resistivity

☒ gamma ray

☒ temperature

☐ sonic

Well cored ☐ Yes ☒ No

Conventional

Sidewall

Were cuttings collected ☒ Yes ☐ No

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING

10 Centralizers every 84' from bottom on 4 1/2". Centralizer placed mid string on 7"

WAS WELL COMPLETED AS SHOT HOLE ☐ Yes ☒ No DETAILS

WAS WELL COMPLETED OPEN HOLE? ☐ Yes ☒ No DETAILS

WERE TRACERS USED ☐ Yes ☒ No TYPE OF TRACER(S) USED

API 47- 043 - 03468 Farm name ALLEN, TERRY & DAWNA Well number 124

PERFORATION RECORD

[illegible]

Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

[illegible]

Please insert additional pages as applicable.

API 47- 043 - 03468

Farm name ALLEN, TERRY & DAWNA

Well number 124

PRODUCING FORMATION(S)

DEPTHS

Berea 2622'-2632' TVD 2622'-2632' MD

Please insert additional pages as applicable.

GAS TEST ☐ Build up ☐ Drawdown ☐ Open Flow

OIL TEST ☐ Flow ☐ Pump

SHUT-IN PRESSURE Surface _____ psi Bottom Hole _____ psi DURATION OF TEST _____ hrs

OPEN FLOW Gas _____ mcfpd Oil _____ bpd NGL _____ bpd Water _____ bpd
GAS MEASURED BY ☐ Estimated ☐ Orifice ☐ Pilot

LITHOLOGY/ FORMATION	TOP DEPTH IN FT NAME TVD	BOTTOM DEPTH IN FT TVD	TOP DEPTH IN FT MD	BOTTOM DEPTH IN FT MD	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H ₂ S, ETC)
-------------------------	--------------------------------	------------------------------	--------------------------	-----------------------------	--

Sand/Shale	0	729	0		
Pittsburgh Coal	729	735			
Sand/Shale	735	1892			
Big Lime	1892	2098			
Big Injun	2098	2203			
Shale	2203	2598			
Coffee Shale	2598	2619			
Berea	2619	2640			
Shale	2640	2750			
TD	2750				

Please insert additional pages as applicable.

Drilling Contractor Decker Drilling

Address 11565 State Route 676 City Vincent State OH Zip 45784

Logging Company Weatherford International

Address 777 North River Avenue City Weston State WV Zip 26452

Cementing Company Universal Services

Address 5252 Rt 1428 City Allen State KY Zip 41601

Stimulating Company Producers Service Corp.

Address 109 South Graham Street City Zanesville State OH Zip 43701

Please insert additional pages as applicable.

Completed by Roger Heldman

Telephone 304-420-1107

Signature [Signature] Title Operations Manager Date 7/21/14

Submittal of Hydraulic Fracturing Chemical Disclosure Information

Attach copy of FRACFOCUS Registry

Prepared for:
HG Energy
Dustin Hendershot
304 771 5432



Prepared by:
Producers Service Corp
Chris Bryan
109 S. Graham St.
Zanesville, OH 43702
740-454-6253

INVOICE #:	16737
WELL NAME:	M A Bays #124
STATE & COUNTY:	Lincoln, WV
TOWNSHIP/FIELD:	Griffithsville
DATE of SERVICE:	6/27/2014
CUSTOMER PO#	

[illegible]

Customer Approval: _____

State of West Virginia
Department of Environmental Protection - Office of Oil and Gas
Well Operator's Report of Well Work

API 47-043-03469 County LINCOLN District DUVAL
Quad GRIFFITHSVILLE 7.5' Pad Name M.A. BAYS Field/Pool Name GRIFFITHSVILLE
Farm name HG ENERGY LLC Well Number 125
Operator (as registered with the OOG) H.G. ENERGY LLC
Address 5260 DuPONT ROAD City PARKERSBURG State WV Zip 26101

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 4,231,847 M Easting 416,079 M
Landing Point of Curve Northing _____ Easting _____
Bottom Hole Northing _____ Easting _____

Elevation (ft) 985' GL Type of Well ☒ New ☐ Existing Type of Report ☐ Interim ☒ Final
Permit Type ☐ Deviated ☐ Horizontal ☐ Horizontal 6A ☒ Vertical Depth Type ☐ Deep ☒ Shallow
Type of Operation ☐ Convert ☐ Deepen ☒ Drill ☐ Plug Back ☐ Redrilling ☐ Rework ☐ Stimulate
Well Type ☐ Brine Disposal ☐ CBM ☐ Gas ☐ Oil ☒ Secondary Recovery ☐ Solution Mining ☐ Storage ☐ Other _____
Type of Completion ☒ Single ☐ Multiple Fluids Produced ☐ Brine ☐ Gas ☐ NGL ☒ Oil ☐ Other _____
Drilled with ☐ Cable ☒ Rotary

Drilling Media Surface hole ☒ Air ☐ Mud ☒ Fresh Water Intermediate hole ☒ Air ☐ Mud ☒ Fresh Water ☐ Brine
Production hole ☒ Air ☐ Mud ☐ Fresh Water ☒ Brine
Mud Type(s) and Additive(s)
N/A

Date permit issued 6/17/2013 Date drilling commenced 5/29/2014 Date drilling ceased 6/2/14
Date completion activities began 6/24/14 Date completion activities ceased 6/27/14
Verbal plugging (Y/N) N Date permission granted _____ Granted by _____

Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug

Freshwater depth(s) ft 60' Open mine(s) (Y/N) depths N
Salt water depth(s) ft 1,150' Void(s) encountered (Y/N) depths N
Coal depth(s) ft 593'-600' Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

Reviewed by: _____

RECEIVED
Office of Oil and Gas
JUL 22 2014
WV Department of
Environmental Protection

API 47- 043 - 03469

Farm name HG ENERGY LLC

Well number 125

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft	Basket Depth(s)	Did cement circulate (Y/ N) * Provide details below*
Conductor	12 1/4"	11 5/8"	30'	Used	LS		Sand In
Surface	8 3/4"	7"	675'	New	LS	84'	Y
Coal							
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production	6 1/4"	4 1/2"	2582.5'	New	J-55		N
Tubing							
Packer type and depth set							

Comment Details Circulated Est. 30 sks to surface on 7" surface cement job.

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft ³ /sks)	Volume (ft ³)	Cement Top (MD)	WOC (hrs)
Conductor							
Surface	Reg Neat	165	15.6	1.18	195	Surface	8
Coal							
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production	50:50 Pozmix/ Econo	150	14.2	1.27	254	1130'	8
Tubing							

Drillers TD (ft) 2600'

Loggers TD (ft) 2611'

Deepest formation penetrated Berea

Plug back to (ft) N/A

Plug back procedure N/A

Kick off depth (ft) N/A

Check all wireline logs run

☒ caliper ☒ density ☒ deviated/directional ☒ induction
☒ neutron ☒ resistivity ☒ gamma ray ☒ temperature ☐ sonic

Well cored ☐ Yes ☒ No

Conventional Sidewall

Were cuttings collected ☒ Yes ☐ No

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING

6 Centralizers every 84' from bottom on 4 1/2". Centralizer placed mid string on 7"

WAS WELL COMPLETED AS SHOT HOLE ☐ Yes ☒ No DETAILS

WAS WELL COMPLETED OPEN HOLE? ☐ Yes ☒ No DETAILS

WERE TRACERS USED ☐ Yes ☒ No TYPE OF TRACER(S) USED

Well number 125

[illegible]

STIMULATION INFORMATION PER STAGE

[illegible]

Please insert additional pages as applicable.

API 47- 043 - 03469

Farm name HG ENERGY LLC

Well number 125

PRODUCING FORMATION(S)

DEPTHS

Berea 2486'-2496' TVD 2486'-2496' MD

Please insert additional pages as applicable.

GAS TEST ☐ Build up ☐ Drawdown ☐ Open Flow

OIL TEST ☐ Flow ☐ Pump

SHUT-IN PRESSURE Surface _____ psi Bottom Hole _____ psi DURATION OF TEST _____ hrs

OPEN FLOW Gas _____ Oil _____ NGL _____ Water _____
_____ mcfpd _____ bpd _____ bpd _____ bpd
GAS MEASURED BY ☐ Estimated ☐ Orifice ☐ Pilot

LITHOLOGY/ FORMATION	TOP DEPTH IN FT NAME TVD	BOTTOM DEPTH IN FT TVD	TOP DEPTH IN FT MD	BOTTOM DEPTH IN FT MD	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H ₂ S, ETC)
-------------------------	--------------------------------	------------------------------	--------------------------	-----------------------------	--

Sand/Shale	0	593	0		
Pittsburgh Coal	593	600			
Sand/Shale	600	1758			
Big Lime	1758	1960			
Big Injun	1960	2066			
Shale	2066	2462			
Coffee Shale	2462	2483			
Berea	2483	2504			
Shale	2504	2600			
TD	2600				

Please insert additional pages as applicable.

Drilling Contractor Decker Drilling

Address 11565 State Route 676 City Vincent State OH Zip 45784

Logging Company Weatherford International

Address 777 North River Avenue City Weston State WV Zip 26452

Cementing Company Universal Services

Address 5252 Rt 1428 City Allen State KY Zip 41601

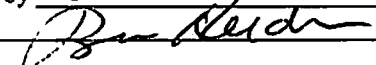
Stimulating Company Producers Service Corp.

Address 109 South Graham Street City Zanesville State OH Zip 43701

Please insert additional pages as applicable.

Completed by Roger Heldman

Telephone 304-420-1107

Signature  Title Operations Manager Date 7/18/14

Submittal of Hydraulic Fracturing Chemical Disclosure Information

Attach copy of FRACFOCUS Registry

Customer Approval: _____

State of West Virginia
Department of Environmental Protection - Office of Oil and Gas
Well Operator's Report of Well Work

pm

API 47 - 043 - 03470 County LINCOLN District DUVAL
Quad GRIFFITHSVILLE 7.5' Pad Name M.A. BAYS Field/Pool Name GRIFFITHSVILLE
Farm name HG ENERGY LLC Well Number 126
Operator (as registered with the OOG) H.G. ENERGY LLC
Address 5260 DuPONT ROAD City PARKERSBURG State WV Zip 26101

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 4,231,760 M Easting 415,934 M
Landing Point of Curve Northing _____ Easting _____
Bottom Hole Northing _____ Easting _____

Elevation (ft) 1,001' GL Type of Well ☒ New ☐ Existing Type of Report ☐ Interim ☒ Final
Permit Type ☐ Deviated ☐ Horizontal ☐ Horizontal 6A ☒ Vertical Depth Type ☐ Deep ☒ Shallow
Type of Operation ☐ Convert ☐ Deepen ☒ Drill ☐ Plug Back ☐ Redrilling ☐ Rework ☐ Stimulate
Well Type ☐ Brine Disposal ☐ CBM ☐ Gas ☐ Oil ☒ Secondary Recovery ☐ Solution Mining ☐ Storage ☐ Other _____
Type of Completion ☒ Single ☐ Multiple Fluids Produced ☐ Brine ☐ Gas ☐ NGL ☒ Oil ☐ Other _____
Drilled with ☐ Cable ☒ Rotary

Drilling Media Surface hole ☒ Air ☐ Mud ☒ Fresh Water Intermediate hole ☒ Air ☐ Mud ☒ Fresh Water ☐ Brine
Production hole ☒ Air ☐ Mud ☐ Fresh Water ☒ Brine
Mud Type(s) and Additive(s)
N/A

Date permit issued 6/13/2013 Date drilling commenced 6/3/2014 Date drilling ceased 6/7/14
Date completion activities began 6/24/14 Date completion activities ceased 6/27/14
Verbal plugging (Y/N) N Date permission granted _____ Granted by _____

Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug

Freshwater depth(s) ft N/A Open mine(s) (Y/N) depths RECEIVED
Salt water depth(s) ft 1180', 1450' Void(s) encountered (Y/N) depths Office of Oil and Gas
Coal depth(s) ft 600'-610' Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N JUL 22 2014

Reviewed by:
WV Department of
Environmental Protection

API 47- 043 - 03470

Farm name HG ENERGY LLC

Well number 126

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft	Basket Depth(s)	Did cement circulate (Y/ N) * Provide details below*
Conductor	12 1/4"	11 5/8"	30'	Used	LS		Sand In
Surface	8 3/4"	7"	675'	New	LS	84'	Y
Coal							
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production	6 1/4"	4 1/2"	2610.25'	New	J-55		N
Tubing							
Packer type and depth set							

Comment Details Circulated Est. 15 sks to surface on 7" surface cement job.

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft ³ /sks)	Volume (ft ³)	Cement Top (MD)	WOC (hrs)
Conductor							
Surface	Reg Neat	155	15.6	1.18	183	Surface	8
Coal							
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production	50:50 Pozmix	150	14.2	1.27	254	1130'	8
Tubing							

Drillers TD (ft) 2630'

Loggers TD (ft) 2644'

Deepest formation penetrated Berea

Plug back to (ft) N/A

Plug back procedure N/A

Kick off depth (ft) N/A

Check all wireline logs run

☒ caliper ☒ density ☒ deviated/directional ☒ induction
☒ neutron ☒ resistivity ☒ gamma ray ☒ temperature ☐ sonic

Well cored ☐ Yes ☒ No

Conventional Sidewall

Were cuttings collected ☒ Yes ☐ No

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING

6 Centralizers every 84 ft from bottom on 4 1/2", Centralizer placed mid string on 7"

WAS WELL COMPLETED AS SHOT HOLE ☐ Yes ☒ No DETAILS

WAS WELL COMPLETED OPEN HOLE? ☐ Yes ☒ No DETAILS

WERE TRACERS USED ☐ Yes ☒ No TYPE OF TRACER(S) USED

Well number 126

PERFORATION RECORD

[illegible]

Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

[illegible]

Please insert additional pages as applicable.

API 47- 043 . 03470 Farm name HG ENERGY LLC Well number 126

PRODUCING FORMATION(S)

DEPTHS

Berea	2504'-2512'	TVD	2504'-2512'	MD
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Please insert additional pages as applicable.

GAS TEST ☐ Build up ☐ Drawdown ☐ Open Flow **OIL TEST** ☐ Flow ☐ Pump

SHUT-IN PRESSURE Surface _____ psi Bottom Hole _____ psi DURATION OF TEST _____ hrs

OPEN FLOW	Gas	Oil	NGL	Water	GAS MEASURED BY		
	mcfpd	bpd	bpd	bpd	<input type="checkbox"/> Estimated	<input type="checkbox"/> Orifice	<input type="checkbox"/> Pilot

[illegible]

Sand/Shale	0	600	0		
Pittsburgh Coal	600	610			
Sand/Shale	610	1767			
Big Lime	1767	1972			
Big Injun	1972	2080			
Shale	2080	2480			
Coffee Shale	2480	2500			
Berea	2500	2524			
Shale	2524	2630			
TD	2630				

Please insert additional pages as applicable.

Drilling Contractor	Decker Drilling					
Address	11565 State Route 676	City	Vincent	State	OH	Zip 45784

Logging Company Weatherford International
Address 777 North River Avenue City Weston State WV Zip 26452

Cementing Company		Universal Services				
Address	5252 Rt 1428	City	Allen	State	KY	Zip 41601

Stimulating Company Producers Service Corp.
Address 109 South Graham Street City Zanesville State OH Zip 43701

Please insert additional pages as applicable.

Completed by Roger Heldman Telephone 304-420-1107
Signature *Roger Heldman* Title Operations Manger Date 5/18/14

Submittal of Hydraulic Fracturing Chemical Disclosure Information **Attach copy of FRACFOCUS Registry**

WR-35
Rev (9-11)

State of West Virginia
Department of Environmental Protection
Office of Oil and Gas
Well Operator's Report of Well Work

DATE: 7/7/14
API #: 47-7500026

Farm name: U.S. Dept. of Interior Operator Well No.: 7456

LOCATION: Elevation: 3525 ft Quadrange: Wildell

District: Green Bank County: Pocahontas
Latitude: 1048 Feet South of 38 Deg. 40 Min. 00 Sec.
Longitude 3995 Feet West of 79 Deg. 45 Min. 00 Sec.

Company: Columbia Gas Transmission, LLC

Address: 1700 MacCorkle Ave SE	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Charleston, WV 25325-1273	* no existing	casing altered		
Agent: Paul Amick				
Inspector: Bryan Harris				
Date Permit Issued: 6/27/14				
Date Well Work Commenced: 6/30/14				
Date Well Work Completed: 7/3/14				
Verbal Plugging: NA				
Date Permission granted on:				
Rotary <input type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>				
Total Vertical Depth (ft):				
Total Measured Depth (ft): 6123 (existing)				
Fresh Water Depth (ft.): 80' & 142' rpt'd by driller in 1965				
Salt Water Depth (ft.): none rpt'd by driller in 1965				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.): none rpt'd by driller in 1965				
Void(s) encountered (N/Y) Depth(s) none rpt'd				

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Environmental Protection

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Oriskany (natural gas storage) Pay zone depth (ft) 5987 - 6035

Gas: Initial open flow MCF/d Oil: Initial open flow Bbl/d

Final open flow MCF/d Final open flow Bbl/d

Time of open flow between initial and final tests Hours

Static rock Pressure psig (surface pressure) after Hours

Second producing formation Pay zone depth (ft)

Gas: Initial open flow MCF/d Oil: Initial open flow Bbl/d

Final open flow MCF/d Final open flow Bbl/d

Time of open flow between initial and final tests Hours

Static rock Pressure psig (surface pressure) after Hours



I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

James E. Amick
Signature

7/7/14
Date

75-00026

Were core samples taken? Yes _____ No X

Were cuttings caught during drilling? Yes _____ No N/A

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list No

NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.

Perforated Intervals, Fracturing, or Stimulating:

Performed coil tubing hydro-blast mechanical wash and acid treatment.

Acid treatment: 4000 gal HCl acid, 300 bbls fresh water, Avg rate = 4 bpm, ATP = 0 psig

Plug Back Details Including Plug Type and Depth(s):

<u>Formations Encountered:</u>	<u>Top Depth</u>	<u>/</u>	<u>Bottom Depth</u>
<u>Surface:</u>			

N/A - no new borehole drilled

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